



Product Data Sheet

MT-ATP6 Protein, Chicken (Cell-Free, His)

Cat. No.: HY-P702382

Synonyms: ATP synthase subunit a; F-ATPase protein 6

Species:

E. coli Cell-free Source: Accession: P14092 (M1-I227)

Gene ID:

26.3 kDa Molecular Weight:

PROPERTIES

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AA	Sea	uen	ce

MNLSFFDQFS SPCLLGIPLI LPSLLLPALL LPSPGNRWIN NRLSTIQLWF THLITKQLMT PLNKAGHKWA LLLTSLILML LSINLLGLLP YTFTPTTQLS MNMALALPLW LATLLTGLRN QPSASLGHLL PEGTPTPLIP ALIMIETTSL LIRPLALGVR ALLPMMPSIS ALTALILFLL LTANLTAGHL LIQLISTATI

TILEVAVAMI QAYVFVLLLS LYLQENI

Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Endotoxin Level

<1 EU/ μ g, determined by LAL method.

Reconsititution

It is not recommended to reconstitute to a concentration less than 100 $\mu g/mL$ in ddH₂O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The MT-ATP6 protein is an integral component of the mitochondrial membrane ATP synthase, also known as Complex V, which facilitates the conversion of ADP to ATP in the presence of a proton gradient across the mitochondrial membrane. This gradient is established by the electron transport complexes of the respiratory chain. The F-type ATPases, to which MT-ATP6 belongs, are comprised of two primary structural domains: F(1), encompassing the extramembraneous catalytic core, and F(0), housing the membrane proton channel. These domains are interconnected by a central stalk and a peripheral

stalk. During the catalytic process, ATP synthesis in the F(1) catalytic domain is coordinated with proton translocation through a rotary mechanism involving the central stalk subunits. MT-ATP6, as a key component of the proton channel, likely plays a direct role in facilitating the translocation of protons across the membrane. The overall F-type ATPase complex includes two components: CF(1), the catalytic core, and CF(0), the membrane proton channel, with specific subunits contributing to their distinct functions.

Caution: Product has not been fully validated for medical applications. For research use only.

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